IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF VIRGINIA
DANVILLE DIVISION

VIRGINIA URANIUM, INC.,
6 North Main Street
Chatham, VA 24531,

COLES HILL, LLC,
1040 Coles Road
Chatham, VA 24531,

BOWEN MINERALS, LLC
253 Sheva Road
Chatham, VA 24531,

VIRGINIA ENERGY RESOURCES, INC.
675 W. Hastings Street, Suite 611
Vancouver, British Columbia
Canada V6B 1N2,

Plaintiffs,

v.

TERRY MCAULIFFE, in his official capacity as Governor of Virginia,
Patrick Henry Building
1111 East Broad Street
Richmond, VA 23219,

MAURICE JONES, in his official capacity as Virginia Secretary of Commerce and Trade,
Patrick Henry Building
1111 East Broad Street
Richmond, VA 23219,

CONRAD SPANGLER, in his official capacity as Director of the Virginia Department of Mines, Minerals and Energy,
Washington Building, 8th Floor
1100 Bank Street
Richmond, VA 23219,

BRADLEY C. LAMBERT, in his official capacity as Deputy Director of the Virginia Department of Mines, Minerals and Energy,

Civil Action No. 4:15CV00031

3405 Mountain Empire Road
Big Stone Gap, VA 24219,

JAMES P. SKORUPA, in his official capacity as Director of the Virginia Department of Mines, Minerals and Energy's Division of Mineral Mining,
900 Natural Resources Drive, Suite 400
Charlottesville, VA 22903,

MOLLY J. WARD, in her official capacity as Virginia Secretary of Natural Resources,
Patrick Henry Building
1111 East Broad Street
Richmond, VA 23219,

DAVID K. PAYLOR, in his official capacity as Director of the Virginia Department of Environmental Quality,
629 East Main Street
Richmond, VA 23219,

ROBERT J. WELD, in his official capacity as Regional Director of the Department of Environmental Quality's Blue Ridge Regional Office,
3019 Peters Creek Road
Roanoke, VA 24019,

MICHAEL DOWD, in his official capacity as Director of the Virginia Department of Environmental Quality's Air Division,
629 East Main Street
Richmond, VA 23219,

MELANIE D. DAVENPORT, in her official capacity as Director of the Virginia Department of Environmental Quality's Water Permitting Division,
629 East Main Street
Richmond, VA 23219,

JUSTIN WILLIAMS, in his official capacity as Director of the Virginia Department of Environmental Quality's Division of Land Protection and Revitalization,

629 East Main Street
Richmond, VA 23219,

Defendants.

COMPLAINT FOR DECLARATORY AND INJUNCTIVE RELIEF

Plaintiffs Virginia Uranium, Inc., Coles Hill, LLC, Bowen Minerals, LLC, and Virginia Energy Resources, Inc. (collectively "Plaintiffs" or "Virginia Uranium"), by and through the undersigned attorneys, file this Complaint against the above-captioned Defendants, in their official capacities as the Governor and officers of Virginia agencies responsible for the regulation of mining activities in the Commonwealth (collectively "Defendants"). Plaintiffs seek both declaratory and injunctive relief: a declaration that the moratorium on uranium mining enacted by the Commonwealth in 1982 and enforced ever since is preempted by supreme federal law, and an injunction compelling Defendants to ignore that invalid state statute and accept and process Virginia Uranium's permit and license applications in the same manner they would an application relating to any other natural mineral resource. Plaintiffs hereby allege as follows:

INTRODUCTION

1. The United States Constitution makes federal law "the supreme Law of the Land," and anything in the "Laws of any State" that either conflicts with federal law or invades a field of plenary federal concern is preempted and denied legal force and effect. Early on in the nuclear age, Congress recognized that the acquisition, storage, and use of radioactive materials like uranium within the United States raise vital issues of national security, commerce, and welfare and thus are matters of overriding federal concern. It further recognized that the proper handling of radioactive materials raises important safety concerns that are most effectively managed on the federal level. Accordingly, it enacted the Atomic Energy Act of 1954, which, as the Supreme Court recognized over a quarter-century ago, preempts the entire field of

radiological safety concerns, except in those narrow enclaves of State authority that Congress has specifically reserved.

2. In defiance of this unequivocal exercise of supreme federal power, in 1982 Virginia enacted a "moratorium" that bans the mining of uranium in the Commonwealth. Section 45.1-283 of the Virginia Code provides:

> Notwithstanding any other provision of law, permit applications for uranium mining shall not be accepted by any agency of the Commonwealth prior to July 1, 1984, and until a program for permitting uranium mining is established by statute.

3. Virginia's ban on uranium mining was from the outset grounded in the very radiological safety concerns that Congress placed outside of the regulatory authority of the States. And in the decades since, Virginia has extended and then repeatedly refused to lift its ban, actions that were motivated by those same—preempted—radiological safety concerns.

4. Virginia's ban on uranium mining has had a devastating effect on Plaintiffs' property rights. Virginia Uranium controls 3,500 acres of property, more or less, in rural Pittsylvania County that sit atop a deposit of an estimated 119 million pounds of uranium ore. This deposit—the largest known deposit of uranium in the United States and one of the largest in the world—would have a market value of approximate $6 billion if it could be mined and sold to America's nuclear power plants. But it is worth nothing so long as Virginia requires it to remain in the ground. And according to multiple studies, its excavation would bring unprecedented economic prosperity to the region. What is more, because nearly 90%of the uranium used in America's nuclear power plants is imported—roughly one-fifth of it from Russia—extracting the uranium in Pittsylvania County would significantly contribute to the Nation's energy independence from its hostile geopolitical rivals.

5. Virginia's ban on uranium mining is grounded on the concern that the radioactive byproduct, called "tailings," created in the process of extracting and processing uranium ore

might contaminate water supplies. As numerous studies indicate, however, if processed and stored with the use of modern, reliable mining technology and in compliance with stringent federal regulations promulgated by the Nuclear Regulatory Commission ("NRC"), uranium tailings can be safely stored without significant risk to the health and safety of those who live in the area. In other words, when Virginia asked the question whether the development of the Commonwealth's uranium resources posed an unacceptable risk to health and safety, it got the answer wrong. But more importantly, it had no business asking that question to begin with. For the radiological safety concerns that are at the heart of Virginia's ban are squarely within the field of exclusive federal regulatory concern.

6. Because Virginia's ban on uranium mining is grounded squarely in the field of radiological safety concerns that Congress has deliberately withdrawn from Virginia's regulatory jurisdiction, it is in direct, irreconcilable conflict with federal law. The ban is therefore invalid under the Supremacy Clause. *Pacific Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190 (1983); *Entergy Nuclear Vermont Yankee, LLC v. Shumlin*, 733 F.3d 393 (2d Cir. 2013). And because this is so, Plaintiffs are entitled to a judgment declaring that ban a legal nullity and enjoining Defendants from giving it any force or effect.

JURISDICTION AND VENUE

7. This Court has subject-matter jurisdiction over Plaintiffs' preemption claim under 28 U.S.C. § 1331. Plaintiffs seek remedies under 28 U.S.C. §§ 1651, 2201, and 2202.

8. Venue is proper in this Court under 28 U.S.C. § 1391(b)(2) and W.D. VA. GEN. R. 2(a)–(b), because the Coles Hill and Bowen Minerals properties, which contain the uranium deposit that is the subject of this action, are wholly situated in Pittsylvania County, within this Division.

PARTIES

9. Plaintiff Virginia Uranium, Inc. is a Virginia corporation formed in 2007 by Walter Coles, Sr., and his neighbor Henry Bowen to develop the large uranium deposit that lies beneath their adjoining farms. Virginia Uranium, Inc. has an exclusive right to the mineral estate in the uranium beneath the Coles Hill and Bowen family farms until 2045, pursuant to a long-term lease. Virginia Uranium, Inc. is chartered and headquartered in Virginia. Its principal place of business is 6 North Main Street, Chatham, VA 24531.

10. Plaintiff Coles Hill, LLC is a Virginia limited liability company that owns the land containing the bulk of the Coles Hill uranium deposit. Coles Hill, LLC leases the mineral estate in that part of the deposit to Plaintiff Virginia Uranium, Inc., retaining a royalty interest in the mineral estate. Coles Hill, LLC is registered and headquartered in Virginia. Its principal place of business is 1040 Coles Road, Chatham, VA 24531.

11. Plaintiff Bowen Minerals, LLC is a Virginia limited liability company which owns the land containing a portion of the Coles Hill uranium deposit. Bowen Minerals, LLC leases the mineral estate in that part of the deposit to Plaintiff Virginia Uranium, Inc., retaining a royalty interest in the mineral estate. Bowen Minerals, LLC is registered and headquartered in Virginia. Its principal place of business is 253 Sheva Road, Chatham, VA 24531.

12. Plaintiff Virginia Energy Resources, Inc., is the corporate parent and sole owner of Plaintiff Virginia Uranium, Inc. Virginia Energy Resources, Inc., is a publicly traded corporation chartered and headquartered in British Columbia, Canada. Its principal place of business is 675 West Hastings Street, Suite 611, Vancouver, BC, Canada V6B 1N2.

13. Defendant Terry McAuliffe is the Governor of Virginia. As head of the Commonwealth's executive branch, he supervises the Secretary of Commerce and Trade and the Secretary of Natural Resources, and, through them, the Department of Mines, Minerals and

Energy ("DMME") and the Department of Environmental Quality ("DEQ"). His official address is Patrick Henry Building, 1111 East Broad Street, Richmond, VA 23219. He is being sued in his official capacity.

14. Defendant Maurice Jones is Virginia's Secretary of Commerce and Trade. Subject to the direction and supervision of the Governor, he is responsible for setting the policy of the Virginia Department of Mines, Minerals, and Energy and holding its officers accountable in the conduct of their powers and duties. His official address is Patrick Henry Building, 1111 East Broad Street, Richmond, VA 23219. He is being sued in his official capacity.

15. Defendant Conrad Spangler is the Director of the Virginia Department of Mines, Minerals and Energy. As chief officer of the DMME, he exercises, delegates, or supervises all the powers of the DMME, subject to oversight by the Secretary of Commerce and Trade. His official address is Washington Building, 8th Floor, 1100 Bank Street, Richmond, VA 23219. He is being sued in his official capacity.

16. Defendant Bradley C. Lambert is a Deputy Director of the Virginia Department of Mines, Minerals and Energy. As Deputy Director, he oversees—subject to the supervision of the Director—the DMME's regulatory Divisions, including the Division of Mineral Mining, which operates the DMME's permitting process. His official address is 3405 Mountain Empire Road, Big Stone Gap, VA 24219. He is being sued in his official capacity.

17. Defendant James P. Skorupa is the Director of the DMME's Division of Mineral Mining. As Director, he exercises, delegates, or supervises the permitting and licensing power of the Division, subject to the oversight of the Director and Deputy Director. His official address is 900 Natural Resources Drive, Suite 400, Charlottesville, VA 22903. He is being sued in his official capacity.

18. Defendant Molly J. Ward is Virginia's Secretary of Natural Resources. Subject to the direction and supervision of the Governor, she is responsible for setting the policy of the Virginia Department of Environmental Quality and holding its officers accountable in the conduct of their powers and duties. Her official address is Patrick Henry Building, 1111 East Broad Street, Richmond, VA 23219. She is being sued in her official capacity.

19. Defendant David K. Paylor is the Director of the Virginia Department of Environmental Quality. As chief officer of the DEQ, he exercises, delegates, or supervises all the powers of the DEQ, subject to oversight by the Secretary of Natural Resources. His official address is 629 East Main Street, Richmond, VA 23219. He is being sued in his official capacity.

20. Defendant Robert J. Weld is the Regional Director of the DEQ's Blue Ridge Regional Office. As Regional Director, he exercises, delegates, or supervises—subject to oversight by the DEQ's Director—the permitting and licensing powers and duties of the Division with respect to applications from Pittsylvania County, where Plaintiffs' uranium deposit is situated. His official address is 3019 Peters Creek Road, Roanoke, VA 24019. He is being sued in his official capacity.

21. Defendant Michael Dowd is the Director of the DEQ's Air Division. As Director, he exercises, delegates, or supervises the DEQ's permitting and licensing powers and duties with respect to air pollution, subject to the oversight of the DEQ's Director. His official address is 629 East Main Street, Richmond, VA 23219. He is being sued in his official capacity.

22. Defendant Melanie D. Davenport is the Director of the DEQ's Water Permitting Division. As Director, she exercises, delegates, or supervises the DEQ's permitting and licensing powers and duties with respect to water pollution, subject to the oversight of the DEQ's Director.

Her official address is 629 East Main Street, Richmond, VA 23219. She is being sued in her official capacity.

23. Defendant Justin Williams is the Director of the DEQ's Division of Land Protection and Revitalization. As Director, he exercises, delegates, or supervises the DEQ's permitting and licensing powers and duties with respect to hazardous waste, subject to the oversight of the DEQ's Director. His official address is 629 East Main Street, Richmond, VA 23219. He is being sued in his official capacity.

FACTUAL ALLEGATIONS

The Coles Hill Uranium Deposit

24. Located just to the northeast of Chatham, Virginia, the Coles Hill estate's gently sloped fields have been farmed by the Coles family since shortly after the Revolutionary War. Beneath those fields lies a deposit of approximately 119 million pounds of uranium ore—the largest natural deposit of uranium in the United States and one of the largest in the world.

25. The bulk of the Coles Hill deposit is located on land owned by Plaintiff Coles Hill, LLC. Walter Coles, Sr., has lived on the Coles Hill family estate ever since retiring from a career in the United States Foreign Service in 2003. Mr. Coles is also the Chairman, President, and CEO of Plaintiff Virginia Uranium, Inc., which possesses a long-term leasehold interest in the mineral estate in the uranium until 2045. Virginia Uranium, Inc., also leases the mineral estate in the smaller portion of the uranium deposit that lies beneath the neighboring Bowen family farm, pursuant to a similar lease with Plaintiff Bowen Minerals, LLC.

26. The economic and energy-generating potential of the Coles Hill deposit is enormous. At uranium's current pricing, the deposit is worth about $6 billion, if it can be extracted from the ground. Once mined and processed, the Coles Hill deposit contains enough uranium to power all of the United States' domestic nuclear reactors continuously for two years.

Indeed, the uranium beneath Coles Hill could produce an amount of energy equivalent to 3.6 billion barrels of oil—and with a fraction of the greenhouse gas emissions.

27. As several studies have confirmed, the process of mining the uranium beneath Coles Hill, processing it, and shipping it off-site would create hundreds of jobs and bring unprecedented economic growth to the region. For example, in 2011, Chmura Economics & Analytics—an independent consulting firm commissioned by the Virginia Coal and Energy Commission to study the socioeconomic impacts of uranium mining in Virginia—released a study finding that uranium mining in Coles Hills, if allowed to go forward, would create 1,052 annual jobs and would generate $4.8 billion of net revenue for Virginia businesses.

28. Allowing the uranium in the Coles Hill deposit to be mined is also in the national security interest of the United States. Nuclear power plants produce nearly 20% of the nation's electricity, but nearly 90% of the uranium used in those power plants is imported. Nineteen percent of that uranium is imported from Russia. Indeed, Russian-controlled energy companies have aggressively sought to take control of uranium-mining companies throughout the world—including, as recently reported, the large Canadian company Uranium One. Besides Russia's own uranium reserves and the extensive stakes Russian companies own in uranium operations in Kazakhstan, the Russians have now gained control of one-fifth of the uranium production capacity in the United States.

The Process of Uranium Development

29. Developing the uranium deposit beneath Coles Hill would entail three basic processes: mining, milling, and tailings management.

30. First, the raw uranium ore must be *mined* from the ground. Because of the mineralogical properties of the Coles Hill deposit, the uranium there would likely be extracted through a conventional underground mine, much like coal, titanium, and numerous other

minerals, many of which are currently being mined in Virginia. Virginia has no similar ban on mining any mineral other than uranium.

31. Once the uranium ore is extracted from the ground, it needs to be *milled* or processed into useable form. Typically, an on-site uranium mill grinds the uranium ore into a sand, which is then run through either an acidic or alkaline solution to separate the pure uranium from the waste or "tailings." The uranium is then concentrated and dried into "yellowcake," which is the final product that is commercially sold and shipped off-site for enrichment.

32. Finally, the "tailings," or the rock left behind when the uranium is removed from the raw ore, must be secured in a *tailings management* facility. Though the pure uranium is separated from the tailings in the milling process, the tailings continue to have roughly 85% of their naturally occurring radioactivity. Accordingly, well-known and thoroughly tested best practices—incorporated in the federal regulations discussed below—require that the tailings be stored securely, in a way that is designed to keep them from contaminating the surrounding air, groundwater, and surface water. For example, if uranium development is allowed to go forward at Coles Hill, Virginia Uranium plans to secure the resulting tailings in safe and reliable below-grade cells, which are capped on top with synthetic and earthen materials to prevent the release of radioactive materials into the air, and lined on the bottom with multiple layers of heavy-duty materials to prevent any release into the surrounding soil or groundwater.

The Federal Government Has Plenary, Exclusive Authority over Radiological Safety Concerns Related to Uranium Milling and Tailings Management

33. The economic, environmental, and national security interests implicated by domestic uranium production make it a matter of singularly national concern. Recognizing this, Congress declared in the Atomic Energy Act ("AEA") that "[t]he development, utilization, and control of atomic energy for military and for all other purposes are vital to the common defense

and security," and the "processing and utilization" of nuclear source material like uranium "must be regulated in the *national* interest." 42 U.S.C. § 2012(a), (d) (emphasis added).

34. Like any other human activity, uranium development is not without risk. The milling and tailings management processes each raise their own discrete set of radiological health and safety concerns. Small amounts of radon and radioactive dust and fluid are created by the *milling* process and could affect the surrounding environment if not properly contained. And *tailings* must be securely stored, to prevent any radioactive materials from escaping into the air, leaking into the groundwater, and being released to surface waters.

35. All of these risks may be controlled within acceptable levels through the use of modern mining technology and compliance with the relevant NRC regulations. One independent study concluded, for example, that if the uranium beneath Coles Hill were developed according to best practices, the most-exposed resident of the area surrounding the operation would be exposed to only an additional 7.8 millirems of radiation annually. SENES CONSULTANTS LTD., ASSESSMENT OF RISK FROM URANIUM MINING IN VIRGINIA S-2 (1984), https://goo.gl/mRxxtK (last visited Aug. 5, 2015). That amounts to a tiny fraction of the 620 millirems of radiation the average American is exposed to each year, and the marginal health risks are similarly negligible.

36. Indeed, Virginia is currently home to a wide variety of nuclear activities that potentially pose a far higher radiological safety risk than uranium development at Coles Hill ever could. In Lynchburg, for example, the energy company Babcock & Wilcox produces nuclear fuel for the United States Navy. The uranium used in this fuel is highly enriched to 90% or above, orders of magnitude higher than the naturally occurring materials that would be processed and stored at Coles Hill. AREVA, a global player in nuclear energy, also has a facility in Lynchburg, where it does research and development, and maintenance on its nuclear reactors. Until recently,

AREVA also manufactured commercial nuclear fuel in Lynchburg. In addition, the defense contractor Northrop Grumman operates a shipyard in Newport News, where it designs and builds nuclear-powered naval vessels. Finally, over a third of the Commonwealth's electricity is supplied by the four nuclear power plants that operate in Virginia—two in North Anna and another two in Surry. Virginia has thus long embraced the presence of nuclear facilities and activities within its borders, making the judgment that the marginal radiological safety risk they pose is far outweighed by their many benefits. And compared to many of these activities, the risk associated with developing the uranium at Coles Hill is simply negligible.

37. More importantly, Congress has concluded that the health and safety issues associated with uranium development—like the benefits—are national in scope and for the most part must be managed on the national level. While Congress has left safety regulation of the *mining* process to the States, *it has made the radiological safety of the milling and tailings management processes exclusively matters of federal concern.*

38. Operation of a uranium mill requires licensure by the NRC, licensure that is subject to compliance with the detailed health-and-safety regulations that have been promulgated under the AEA by the NRC. *See* 10 C.F.R. § 40.31(h); 10 C.F.R. Pt. 40, App. A. For example, NRC regulations require a mill operator to employ strict "emission controls" to ensure that "all airborne effluent releases," such as "emissions from yellowcake drying and packaging operations" are "reduced to levels as low as is reasonably achievable." *Id.* Such control devices "must be operative at all times during drying and packaging operations and whenever air is exhausting from the yellowcake stack." *Id.* The performance of the emission control equipment must be checked and logged hourly. To further control the release of radioactive materials during milling, the tailings that come out of the mill "must be wetted or chemically stabilized to prevent

or minimize blowing and dusting to the maximum extent reasonably achievable." *Id.* The milling operations must be managed so as to ensure that the surrounding area is not exposed to radiation that exceeds strict quantitative limits set by regulation.

39. Operation of a uranium tailings management facility similarly requires a license by the NRC, and is thus subject to its regulatory jurisdiction. 10 C.F.R. § 40.31(h). The design, construction, and operation of a tailings management facility likewise must comply with detailed and extensive regulations promulgated by the NRC. 10 C.F.R. Pt. 40, App. A. Satisfaction of the NRC's criteria is guaranteed initially by the requirement that an applicant "clearly demonstrate" in its application for a license to operate a mill and tailings management facility that it meets each of the NRC's standards. *Id.* And long-term compliance with those standards is guaranteed by the requirement that "[f]inancial surety arrangements must be established by each mill operator before the commencement of operations to assure that sufficient funds will be available to carry out the decontamination and decommissioning of the mill and site and for the reclamation of any tailings or waste disposal areas." *Id.*

40. The NRC's regulations govern, as an initial matter, *where* a tailings management facility may be constructed. Potential sites must be judged in light of the goal of "permanent isolation of tailings and associated contaminants by minimizing disturbance and dispersion by natural forces, and . . . without ongoing maintenance." *Id.* The NRC lists several features of potential sites that contribute to this goal—including "[r]emoteness from populated areas" and the "[p]otential for minimizing erosion, disturbance, and dispersion by natural forces over the long term"—and requires that the selection of the ultimate tailings-management site be based on "an optimization to the maximum extent reasonably achievable in terms of these features." *Id.* Moreover, the facility "may not be located near a capable fault that could cause a maximum

credible earthquake larger than that which the impoundment could reasonably be expected to withstand." *Id.*

41. The NRC requires that a tailings disposal facility either be placed below grade "in mines or specially excavated pits," or in an above-grade facility that is designed to "provide reasonably equivalent isolation of the tailings from natural erosional forces." *Id.* The facility must be designed to minimize erosion due to rainfall and flooding and to provide "good wind protection." *Id.* "A full self-sustaining vegetative cover must be established or rock cover employed to reduce wind and water erosion to negligible levels." *Id.* And all surfaces "must be contoured to avoid areas of concentrated surface runoff or abrupt or sharp changes in slope gradient." *Id.*

42. The NRC regulates the design and manufacture of the liner that must be placed at the bottom of the tailings storage facility "to prevent any migration of wastes out of the impoundment to the adjacent subsurface soil, ground water, or surface water." *Id.* The liner must be "[c]onstructed of materials that have appropriate chemical properties and sufficient strength and thickness," it must be placed on a "foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression, or uplift," and it must "cover all surrounding earth likely to be in contact with the wastes or leachate." *Id.* To ensure that the liner is functioning effectively, the operator must implement a groundwater "detection monitoring program" designed "to detect leakage of hazardous constituents from the disposal area." *Id.*

43. The NRC also regulates the design and construction of the cap or cover that is placed over the tailings storage cell once operations are complete. The cover must be made out of earth or an approved alternative, and it must be engineered so as to provide "reasonable

assurance" that it will control the release of radon gas and other radioactive materials within strict, specified limits "for 1,000 years, to the extent reasonably achievable." *Id.* The operator of the facility must "verify through appropriate testing and analysis that the design and construction of the final radon barrier is effective" as soon as possible after the cover is in place; and after operations are complete, "annual site inspections must be conducted by the government agency [(ordinarily, the Department of Energy)] responsible for long-term care of the disposal site to confirm its integrity and to determine the need, if any, for maintenance and/or monitoring." *Id.*

44. The NRC has thus subjected the design, construction, operation, and long-term maintenance of a uranium tailings management facility to strict, extensive, and detailed regulation. And the NRC has made the judgment that compliance with these regulatory requirements will provide adequate protection against the health and safety risks associated with tailings management.

45. Accordingly, pursuant to the AEA's delegation of regulatory authority, the NRC has promulgated regulations that strike a certain balance. On the one hand, in pursuit of health, safety, and environmental concerns, the NRC has put in place strict standards that anyone who wishes to operate a uranium milling or tailings management facility must meet. On the other hand, recognizing that development of domestic uranium deposits carries substantial *benefits*—in terms of national security, economic growth, and the production of clean, independent energy—the NRC has determined that uranium *can* be milled, and its tailings *can* be stored, if its regulatory requirements are satisfied.

46. Whether the balance that the NRC's regulations strike between these competing values is the optimal one is a matter for the federal government to decide, not Virginia.

47. Congress in the AEA, as amended, has provided a narrow route for States to take over limited aspects of the NRC's regulatory authority. Under 42 U.S.C. § 2021, the NRC is authorized to "enter into agreements with the Governor of any State" to transfer to that State its regulatory jurisdiction over uranium milling and tailings management. *Id.* § 2021(b). The agreement process is arduous. Before entering into an agreement with a State, the NRC must ensure that the State program is "compatible" with the federal regulations that would otherwise apply and is "adequate to protect the public health and safety with respect to the materials covered by the . . . agreement." *Id.* § 2021(d)(2). It typically takes the NRC three to five years to verify that a State program provides adequate levels of protection.

48. Once such an agreement is finalized—and only then—"the State shall have authority to regulate the materials covered by the agreement for the protection of the public health and safety from radiation hazards." *Id.* § 2021(b). *Unless and until* such an agreement is finalized, a State can regulate uranium development only "for purposes *other than* protection against radiation hazards." *Id.* § 2021(k) (emphasis added).

49. While Virginia has entered into a limited agreement with the NRC, that agreement *explicitly does not cover* uranium milling or tailings management.

50. Because Virginia's agreement does not cover uranium milling and tailings management, the clear terms of the AEA confine it to regulating uranium development "for purposes other than protection against radiation hazards" related to those activities. *Id.*

51. Congress has completely occupied the field of radiological safety concerns, except in those limited areas expressly carved out for the States. States may regulate mining safety, but they cannot address radiological safety concerns related to uranium milling and tailings management unless they reach an agreement with the NRC transferring to them

jurisdiction over those activities. Subject to those narrow exceptions, any regulation of uranium development that is grounded in radiological safety concerns falls squarely within the exclusively federal field.

Virginia's Moratorium on Uranium Mining Injures Plaintiffs by Unlawfully Prohibiting Them from Obtaining the Permits They Need To Mine Their Uranium

52. In order to legally mine any mineral in Virginia, one needs to obtain several permits from the Commonwealth's agencies.

53. First, Virginia by law requires anyone who wishes to "engage in any mining operation in Virginia" to first obtain a mining permit from the DMME. VA. CODE § 45.1-181. An application for such a permit must include a variety of information about the mineral to be extracted, the land where the mining operations would occur, and the identity of the owners of the land and the operator of the mine, and it must be accompanied by an application fee and a plan of operation that includes a proposal for reclaiming the land after operations have concluded.

54. Second, Virginia's Mine Safety Act requires anyone who "engage[s] in the operation of any mineral mine within this Commonwealth" to obtain—also from the DMME—a Mine Safety permit. *Id.* § 45.1-161.292:30. The application for a Mine Safety permit must identify the mine operator, any agent in charge of the business operation of the mine, and each independent contractor working at the mine; and it must include information "[t]hat is relevant to an assessment of the safety and health risks likely to be associated with the operation of the mine." *Id.* § 45.1-161.292:32.

55. Third, Virginia regulations require anyone seeking to construct a major new stationary source of certain air pollutants to obtain a Prevention of Significant Deterioration permit from the DEQ. 9 VA. ADMIN. CODE §§ 5-50-10 through -420; 5-60-10 through -370.

56. Fourth, by state regulation an entity planning to construct a major new source of certain hazardous air pollutants—including radionuclides like radon—must first obtain a Major Source of Hazardous Air Pollutants, or "Article 7," permit, also from the DEQ. *Id.* § 5-80-1420.

57. Fifth, state law implementing the federal Clean Water Act requires an individual to obtain a Virginia Pollutant Discharge Elimination System permit from the DEQ before discharging effluents into state waters. VA. CODE § 62.1-44.5; 9 VA. ADMIN. CODE § 25-31-10 through -940.

58. Sixth, Virginia's Hazardous Waste Management Act requires any person storing, treating, or disposing of hazardous waste to first obtain a Hazardous Waste Management Facility permit from the DEQ. VA. CODE § 10.1-1426.

59. Until it applies for and receives each of these permits and licenses, Virginia Uranium is legally prohibited from mining the uranium in the Coles Hill deposit. But Defendants, collectively, will not even *accept* an application by Virginia Uranium for any one of these permits, because state law, since 1982, has provided:

> Notwithstanding any other provision of law, permit applications for uranium mining shall not be accepted by any agency of the Commonwealth prior to July 1, 1984, and until a program for permitting uranium mining is established by statute.

VA. CODE § 45.1-283.

Virginia's Moratorium Is Grounded in Radiological Safety Concerns Related to Tailings Management

60. The law recognizes that States can oppose development of nuclear-related facilities and activities out of a variety of concerns, ranging from economic considerations, to environmental impacts, to health and safety issues. But the law also recognizes that this reality—that States rarely act with a singular justification or to promote a singular purpose—cannot be allowed to frustrate judicial inquiry into whether the State's policy has entered a field of

exclusive federal jurisdiction. "If that were the rule, legislatures could nullify nearly all unwanted federal legislation by simply publishing a legislative committee report articulating some state interest or policy—other than frustration of the federal objective—that would be tangentially furthered by the proposed state law." *Entergy Nuclear Vermont Yankee, LLC v. Shumlin*, 733 F.3d 393, 416 (2d Cir. 2013) (internal quotation marks omitted). Accordingly, where, as here, a state prohibition on uranium development is grounded in radiological safety concerns—that is, where these preempted concerns are a motivating or predominant justification for the State's action—then that action itself falls within the field occupied by federal law and is invalid.

61. Virginia's bar on accepting any "permit applications for uranium mining," VA. CODE § 45.1-283, is grounded squarely within the field of radiological safety concerns that has been completely occupied by federal law. The Commonwealth was motivated by these impermissible reasons when it imposed and then extended the uranium ban in the period from 1981 through 1986, and it was motivated by the same preempted considerations when it reconsidered but ultimately declined to lift the ban in the period from 2008 to 2013.

62. Virginia first moved to regulate uranium in 1981. Marline Uranium Corporation ("Marline") discovered the Coles Hill deposit in 1978, and throughout the late '70s Marline acquired leases of the mineral rights to the deposit and took steps to begin developing it. In reaction to Marline's discovery and apparent intent to mine the uranium beneath Coles Hill, the General Assembly in the 1981 session passed Resolution 324, calling on the Coal and Energy Commission ("CEC")—a legislative-branch commission comprised of members of the Assembly and citizen representatives—to create a "Uranium Subcommittee" tasked with "evaluat[ing] the environmental effects of uranium exploration, mining and milling . . . and any possible

detriments to the health, safety, and welfare of Virginia citizens which may result from uranium exploration, mining or milling." Act of Feb. 20, 1981, H.J. Res. 324, 1981 Va. Acts 1404, attached as Exhibit 1. The preamble to Resolution 324 made clear that the Assembly was acting out of concern for "the environmental effects and the possible hazards to the health, safety, and welfare of citizens living in proximity to uranium operations." *Id.* And the subsequent course of the public debate over uranium mining in the early 1980s confirmed that the Commonwealth's primary motivation lay squarely within the field of concerns that Congress has marked off as exclusively federal.

63. In 1982, after an initial round of study, the Uranium Subcommittee recommended that Virginia take the initial step of allowing exploration for uranium ore within the Commonwealth. Based on this recommendation, the Assembly adopted Senate Bill 179, which allowed *exploration* for uranium but simultaneously imposed a moratorium on *mining* uranium until July 1, 1983, to give the Commonwealth an opportunity for further study. In the bill's "declaration of policy," the Assembly reiterated its concern for "the health, safety, and general welfare of the citizens of this Commonwealth," and concluded that "the adoption of additional statutes during the 1983 Session of the General Assembly may be necessary in order to assure that any uranium mining and milling which may occur in the Commonwealth will not adversely affect the environment or the public health and safety." Act of Apr. 7, 1982, ch. 269, 1982 Va. Acts 426, 427, attached as Exhibit 2.

64. In 1983, after further study by the subcommittee, the Assembly extended the moratorium through 1984 at the earliest "and until a program for permitting uranium mining is established by statute"—the current form of the moratorium. Act of Feb. 24, 1983, ch. 3, 1983 Va. Acts 3, attached as Exhibit 3. The Assembly also simultaneously created a Uranium

Administrative Group ("UAG") to conduct a more in-depth "evaluation of the costs and benefits" of "uranium mining and milling activity in the Commonwealth." *Id.*

65. The UAG proceeded to retain a consulting firm, SENES, to conduct a thorough and technical study of the risks and benefits of uranium mining in Virginia. The SENES study concluded that the benefits of mining uranium in Virginia far outweighed the risks. After the SENES firm reported its conclusions, the UAG recommended to the CEC that further research be undertaken, and in January 1984 the CEC created yet another entity, the Uranium Task Force ("UTF"), to undertake this additional research. After evaluating the SENES study, undertaking further research, and holding a series of public meetings, the UTF issued a report in October of 1984 recommending that the Assembly lift the moratorium and allow uranium mining, subject to robust regulation. *See* REPORT OF THE URANIUM TASK FORCE 2 (Oct. 1, 1984), https://goo.gl/Gt90pw (last visited Aug. 5, 2015).

66. In the beginning of 1985, the UAG issued a final report to the CEC, based on the SENES study and the UTF report. REPORT OF THE VIRGINIA COAL & ENERGY COMM'N TO THE GOVERNOR AND THE GENERAL ASSEMB. OF VIRGINIA App. B, S. Doc. No. 15 (1985), http://goo.gl/b5Llvn (last visited Aug. 5, 2015). The UAG's final report again recommended that the moratorium be lifted. The UAG report was supported by 16 of the 18 members of the group. A dissent to the majority's recommendation was filed by Elizabeth H. Haskell.

67. Ms. Haskell's dissent was based almost exclusively on the potential threats to safety posed by tailings management. The dissent begins by citing "[t]he risks of cancer deaths and illnesses from radiation released from the uranium ore and waste products called tailings." *Id.* In particular, Ms. Haskell worried that because Virginia has a "climate where rainfall exceeds

evaporation," the risk that water that "is discharged from the site and filters through tailings" might be transmitted "to people through streams and the groundwater is a major issue." *Id.*

68. This point that Virginia's "net precipitation climate" raises special concerns about the radiological safety of uranium development has remained one of the main objections put forward by opponents of lifting the ban ever since Ms. Haskell first raised it in 1985. Because it is specifically based on the concern that Virginia's wet climate could make it difficult to contain the radioactivity of the uranium *tailings*, it is squarely grounded in the exclusively *federal* field of concern.

69. Ms. Haskell next argued that the report issued by SENES was flawed for several reasons; again, the majority of those reasons were firmly grounded in safety concerns related to tailings management. The dissent asserted that the SENES report erroneously assumed "that there will be no leaching of radioactive wastes or heavy metals to groundwaters" and "no long-term deterioration or collapse of the 100 foot high tailings pile by flood, earthquake, erosion or design failure for the thousands of years the tailings are radioactive." Ms. Haskell thought the possibility of such leaching or deterioration more likely "in the net precipitation climate of Pittsylvania County, where groundwater reaches close to the surface and where above-ground tailings disposal will be required exposing the waste to weather and collapse." *Id.* Ms. Haskell also argued that SENES did not take into account several additional health risks, including the "[e]ffects of a catastrophic event such as a flood, major accident or design failure that could collapse the tailings pile." *Id.* And she claimed that the SENES cost-benefit analysis failed to appreciate that the "risks and costs" of uranium development will "occur for many years after closure of the mine and mill," because "[a]fter closure, the Commonwealth or the Federal Government will assume permanent ownership of the tailings pile," exposing it to the risk of

"catastrophic events" like "a flood or earthquake" that would require "a very expensive tailings remedy." *Id.* Taken together, these "unknowns and . . . identified risks to the public and the environment . . . call for retaining the moratorium on mining and milling." *Id.*

70. Another member of the UAG—Frank E. Wallwork—also filed a brief dissent, making many of the same points as Ms. Haskell. In summarizing his "reasons for rejecting the conclusion of the [UTF]," his primary objection was this one: "The technology to prevent seepage of radionuclides, heavy metals, or chemicals from the tailings area into the ground water has not been developed." *Id.*

71. The CEC forwarded the UAG's report, along with the dissents, to the Governor and General Assembly, including its own recommendation that draft legislation lifting the moratorium at least be considered. The General Assembly decided not to follow the UAG's recommendation, and in 1986, the bill that had been filed seeking to end the moratorium was withdrawn.

72. In short, *both* of the advisory bodies created and tasked by the Assembly with studying uranium development *recommended* that the moratorium on uranium mining be lifted; the principal objection to those recommendations came from Ms. Haskell's dissent, which focused almost exclusively on the radiological safety concerns raised by tailings management. The Assembly adopted Ms. Haskell's recommendation rather than the majority's for the reasons she expressed.

73. In 1986, Marline began to wind up its plans to develop the Coles Hill deposit, ultimately abandoning the project and its leasehold interests in the uranium in 1990.

74. From 2008 to 2013, Virginia again considered whether to allow the development of the Coles Hill uranium deposit. Once again, the opponents to uranium development succeeded

in keeping the ban in place. And once again, Virginia's refusal to allow uranium mining was squarely—and impermissibly—grounded in radiological safety concerns, primarily related to tailings management.

75. In 2007, the Coles and Bowen families established Plaintiff Virginia Uranium, Inc., and conveyed to it leasehold interests in the mineral estate beneath their land. That same year, Virginia Uranium applied for and received a permit from the DMME to engage in "exploration activity" to gain further information about the nature and extent of the Coles Hill deposit. Virginia Uranium also began to urge lawmakers to reconsider the ban on uranium mining. Plaintiffs pursued relief through the political process, attempting to persuade the Commonwealth to lift its ban on uranium rather than forcing it to defend the ban in court.

76. In 2008, the General Assembly formally began reconsideration of the ban on uranium development. Later that year, the Coal and Energy Commission re-created the Uranium Subcommittee, tasking it with examining the issue in depth.

77. In August 2009, the Subcommittee commissioned two studies to assess anew the costs and benefits of uranium development in Virginia. First, the National Academies of Science ("NAS") was asked to conduct a comprehensive, scientific study of health and safety risks posed by uranium development. Second, the Chmura consulting firm was asked to study the likely socioeconomic impacts on the region.

78. The NAS reported its conclusions in 2011. The NAS Report is a comprehensive, 300-page assessment of every conceivable health and safety risk associated with uranium development. While the NAS study analyzed a wide variety of safety risks, the dominant concern emphasized by the study related to tailings management. For example, the NAS concluded that "[p]rotracted exposure to radon decay products generally represents the *greatest radiation-*

related health risk from uranium-related mining and processing operations," and that "[i]n many cases, *tailings represent the predominant source* of radon emission . . . from a mining site." NATIONAL RESEARCH COUNCIL, URANIUM MINING IN VIRGINIA 123, 143 (2011), http://goo.gl/cv0cg (last visited Aug. 5, 2015) (emphases added). And "[a]long with exposure to radon . . . , inadequate containment of uranium tailings most likely represents the highest potential source of radiation exposure, related to uranium mining activities, to the general public." *Id.* at 128.

79. Throughout the 2009–11 period, opposition to lifting the ban centered on radiological safety issues. Some opponents released their own studies of the likely effects of uranium development. For example, in February 2011, the City of Virginia Beach emerged as a major opponent of lifting the ban, even though it is located hundreds of miles from the Coles Hill property. The City released an extensive study it had commissioned on the "Potential Impacts of Uranium Mining in Virginia on Drinking Water Sources." This study "focused on the potential of a catastrophic failure of a uranium-tailings containment structure and subsequent discharge of uranium tailings into the Banister or Roanoke Rivers." MICHAEL BAKER, INT'L, A PRELIMINARY ASSESSMENT OF POTENTIAL IMPACTS OF URANIUM MINING IN VIRGINIA ON DRINKING WATER SOURCES ES-1 (2011), http://goo.gl/efjNFB (last visited Aug. 5, 2015). The study concluded that such a failure "could significantly increase radioactivity concentrations in the river/reservoir system . . . for an extended period of time," affecting all of the residents whose drinking water is drawn from those sources. *Id.* at ES-7. This 300-page study is focused exclusively on the radiological safety risks posed by tailings management.

80. The Virginia Beach study was repeatedly cited by the individuals and interest groups that opposed lifting the ban during this period, giving it an extraordinarily wide influence on the public debate.

81. Groups opposed to uranium development also produced a mass of non-technical literature. The resolutions, flyers, internet posts, newspaper op-eds, brochures, videos, position papers, and comments at public forums demonstrate that those who opposed uranium development in Virginia focused almost exclusively on tailings-related safety concerns.

82. A number of cities and local governments or authorities passed formal resolutions opposing the effort to lift the ban; the bulk of these were trained on concerns about tailings management. The City of Chesapeake, for example, urged that "the mining and milling of the Uranium Reserve poses a risk of environmental contamination in the event the containment structures for the tailings fail due to structural defect, substantial flooding or other cause." City of Chesapeake, *Resolution Requesting that the Virginia General Assembly Maintain the Current Moratorium on Uranium Mining Until the Completion of Scientific Studies Evaluating the Risk of Contamination of Drinking Water Supplies and Harm to the Public Health* (June 1, 2011), http://goo.gl/PB67nI (last visited Aug. 5, 2015). The City of Norfolk adopted a similar resolution, opining that "it is absolutely clear, based upon the National Academy of Sciences and other studies, that it cannot be demonstrated to a reasonable degree of certainty that there would be no significant release of radioactive sediments downstream of the Coles Hill site under any circumstances." City of Norfolk, *A Resolution Stating the City of Norfolk's Opposition to the Mining of Uranium in the Commonwealth of Virginia* (Jul. 24, 2012), http://goo.gl/EG9hHb (last visited Aug. 5, 2015).

83. The less formal statements of the private groups that coalesced in opposition to lifting the ban are to similar effect. For example, one umbrella group of mining opponents, Keep the Ban, published a flyer stating that "[u]ranium mining and processing produces waste materials known as 'tailings' commonly found to include radium, thorium and various harmful heavy metals linked to severe health effects. The Coles Hill site would generate at least 28 million tons of mine and mill waste." It urged readers to tear-off and mail in an attached petition asking state officials "to maintain the ban in order to preserve our drinking water" from the "radioactive and toxic waste [that] would be left in Virginia soils for centuries." *See* Brochure, *Keep the Ban on Uranium Mining in Virginia*, KEEP THE BAN, http://goo.gl/Q3Lm3y (last visited Aug. 5, 2015).

84. The Southern Environmental Law Center ("SELC") was another leading opponent of lifting the ban. Like Keep the Ban, the SELC's dominant concern related to tailings management. For example, a position paper published on SELC's website cites the NAS study as validating its concerns related to "risks to water quality from radioactive tailings," and it cites the Virginia Beach study as demonstrating "that a catastrophic failure of a uranium waste containment structure at the site could contaminate the city's drinking water for as long as two years." *Uranium Mining—A Risky Experiment*, SOUTHERN ENVTL. LAW CTR., https://goo.gl/BksD2J (last visited Aug. 5, 2015). As Cale Jaffe, the senior SELC attorney on the Virginia Uranium project, put it in late 2012, milling and tailings management was "the driving issue" in the public discourse: "You're dealing with a significant amount of mill tailings waste that retains about 85 percent of its radioactivity . . . . Managing that for the long term is what's driving the debate." Mary Beth Jackson, *Milling 'Driving Issue' of Uranium Controversy*, THE DANVILLE REGISTER & BEE, Dec. 11, 2012, http://goo.gl/iaqGZO (last visited Aug. 5, 2015).

85. A third major opposition group, the Virginia chapter of the Sierra Club, was motivated by similar concerns. For example, a flyer sent to local residents at the end of 2010 warned that "[u]ranium mining is a dirty and dangerous business. It creates toxic waste that can leak into our drinking water causing kidney failure and birth defects." Exhibit 4. And a statement on their website warns that "[i]f the ban is lifted and mining commences, left behind will be up to 29 million tons of waste containing radioactive material, which has been linked to kidney disease, cancers, leukemia, and birth defects. Potential water contamination with these toxins could cripple downstream communities and the industries that rely on clean water." Eileen Levandoski, *HOT WATER Film Reveals Burning Truth About Uranium Mining*, VIRGINIA CHAPTER SIERRA CLUB, Nov. 6, 2013, http://goo.gl/3Ms2Lw (last visited Aug. 5, 2015).

86. The arguments advanced and steps taken by the *supporters* of uranium development provide further evidence that the dispositive issue in the public debate was the concern over the radiological safety risks posed by tailings.

87. To aid the Assembly in considering whether to lift the moratorium, Governor McDonnell in January 2012 created a Uranium Working Group ("UWG") to consider the extant research and issue a report summarizing for the Assembly the major scientific concerns and the regulatory steps that would need to be taken should the moratorium be lifted. The UWG was comprised of leading staff from the three Virginia agencies concerned with health, safety, and environmental quality: the DMME, the DEQ, and the Virginia Department of Health. The UWG issued its report in November 2012, which concluded that "[i]f the General Assembly decides to lift the . . . moratorium, the need for a comprehensive program to regulate uranium mining . . . *can be met*." URANIUM WORKING GROUP, 2012 REPORT xiii (2012), http://goo.gl/qrj0iz (last visited Aug. 5, 2015) (emphasis added). That report went on to map out the steps Virginia's

Assembly and agencies would need to take to effectively regulate uranium development. In 2013, a bill was introduced into both the Senate and the House that would have lifted the moratorium and allowed uranium development, subject to stringent regulation based on the recommendations of the NAS and UWG studies. Notably, this legislation provided that "[a] mining permit application shall not be accepted" unless it specified that "all by-product materials, including tailings, will be disposed of below grade at the site where such disposal is to occur." S. 1353, § 45.1-285.18(G)(ii) (2013 Sess.), attached as Exhibit 5.

88. This requirement of below-grade tailings disposal was based on the NAS study, which highlighted this disposal technique as limiting the risk that groundwater and surface water could be contaminated by the tailings. The requirement was touted by the Senate sponsor of the legislation, John C. Watkins, as "directly address[ing]" the "primary environmental concern raised [by opponents]" that the "mill tailings . . . [might] taint drinking waters downstream." John C. Watkins, *Uranium Can Be Mined Safely in Virginia*, RICHMOND TIMES-DISPATCH, Jan. 21, 2013, http://goo.gl/nUcecQ (last visited Aug. 5, 2015).

89. Ultimately, the argument that the tailings left over from uranium mining would expose millions of area residents to radioactive drinking water proved dispositive. At the end of January 2013, Senator Watkins withdrew his bill.

90. There is no doubt about what motivated the Virginia State legislators who opposed lifting the ban, for many of them publicly explained the reason for their opposition: concerns related to uranium tailings. Delegate Danny Marshall, for example, explained his opposition in 2012 by pointing to the " 'tailings' left behind with radioactivity that could take thousands of years to dissipate . . . . Heavy rains and high winds could spread those radioactive materials over long distances, perhaps to other states . . . ." *Uranium Likely to be Hot Topic*, THE

MARTINSVILLE BULLETIN, Dec. 19, 2012, http://goo.gl/UmwHLe (last visited Aug. 5, 2015). Delegate Kenneth Plum justified his stance by pointing to the Virginia Beach study's "finding that a catastrophic failure of a uranium waste containment structure at the site could contaminate the city's drinking water for as long as two years." Kenneth R. Plum, *Uranium Mining in Virginia*, THE CONNECTION, Jul. 10, 2012, http://goo.gl/j3emmq (last visited Aug. 5, 2015). Senator Barbara Favola similarly noted that "I simply can't believe [storing radioactive material underground is safe], because it's going to be stored underground for a very long time . . . And you're talking about radioactive material getting into people's groundwater." Michael Pope, *Uranium Debate Heats Up As Virginia Assembly Session Begins*, WAMU 88.5, Jan. 7, 2013, http://goo.gl/IOOaB0 (last visited Aug. 5, 2015). And Delegate Don Merricks, one of the most vocal opponents of lifting the ban, repeatedly emphasized tailings-related concerns, noting explicitly at one point that "he is not so concerned about the mining as he is about the tailings—the radioactive debris that remains after the uranium has been extracted." Alix Hines, *Is Uranium Mine Scaring People from Southside?*, CAPITAL NEWS SERVICE, Jan. 17, 2013, http://goo.gl/J7QFb8 (last visited Aug. 5, 2015).

91. The November 2013 election of Defendant Governor McAuliffe, who ultimately became resolutely opposed to uranium development, dashed any hopes of reintroducing a bill lifting the moratorium in the next session. The reasons cited by Governor McAuliffe in articulating his opposition to uranium development provide final, conclusive confirmation that the Commonwealth's refusal to lift the ban was squarely grounded in radiological safety concerns related to tailings.

92. Then-candidate McAuliffe came out against uranium mining as early as March 2013, noting that he "would need to be certain that mining uranium can be done safely and

cleaned up completely before a moratorium is lifted. . . . So far I have not seen that." *Cuccinelli, McAuliffe Weigh in on Uranium Mining*, THE VIRGINIA PILOT, Mar. 19, 2013, attached as Exhibit 6.

93. In a May meeting with mining opponents, McAuliffe stated that uranium mining was "a horrible idea." *McAuliffe: No to Uranium Mining*, MARTINSVILLE BULLETIN, May 22, 2013, http://204.12.9.147/article.cfm?ID=37752 (last visited Aug. 5, 2015). His campaign noted that his opposition was based on "concerns that water sources could be threatened by mining or natural events and that mining and milling couldn't be cleaned up completely"—concerns that echo the Virginia Beach study.

94. Shortly after the election, Governor McAuliffe stated unequivocally that he would veto any attempt to lift the ban. The reason he gave for the veto threat—"I'm afraid it would get into the drinking water"—confirms beyond doubt that the motivating cause in Virginia's continued refusal to permit uranium mining was the safety concerns related to tailings management. Jeff E. Schapiro, *McAuliffe Looks to Bury Uranium Issue*, RICHMOND TIMES-DISPATCH, Nov. 13, 2013, http://goo.gl/DgGEPb (last visited Aug. 5, 2015).

95. And in a recent speech to state businessmen, Governor McAuliffe indicated that his position had not changed. "The risk is too high. Show me some science that says our water will absolutely be protected, and I'll consider it." Travis Fain, *McAuliffe on Bills, Campaign Season, Cuba, Uranium, and Clinton*, DAILY PRESS, Mar. 17, 2015, http://goo.gl/VqM7m5 (last visited Aug. 5, 2015).

96. This mass of evidence shows that both in the 1980s and in the period from 2008–2013, Virginia's decision to impose, extend, and retain an outright ban on any uranium development in the Commonwealth was almost exclusively based upon radiological safety

concerns related to tailings management. Were it not for those concerns, the moratorium would have been lifted.

97. The true design and function of Virginia's ban on uranium mining, then, is to act as an absolute bar on the construction of a tailings management facility in the Commonwealth, even if that facility is designed, made, and operated in a way that meets or even exceeds the stringent regulatory requirements promulgated by the NRC. In this way, Virginia's ban on uranium mining frustrates—and indeed, is *impossible to square with*—the NRC's judgment that uranium tailings can be managed and stored safely, if the appropriate precautions are taken.

The Uranium Mining Ban's Effects on Plaintiffs' Property Rights

98. Because of Virginia's ban on uranium mining, Defendants are barred by law from even accepting Virginia Uranium's application for the permits, described in paragraphs 53–58 above, which are required to legally mine the uranium in the Coles Hill deposit.

99. Plaintiffs' uranium deposit—worth approximately $6 billion if mined—is plainly worth *nothing* if it can never be extracted from below the ground. By preventing Plaintiffs from legally mining their uranium, Virginia's ban has thus dramatically injured Plaintiffs by draining their property rights of essentially all value. Indeed, Plaintiffs are injured each day Defendants refuse to process, or even to *accept*, applications for mining permits to develop and make beneficial use of the uranium beneath their land.

100. Virginia Uranium has already expended substantial sums in pursuing its plans to mine uranium at Coles Hill. For example, it has spent over $800,000 on the process of applying for a uranium exploration permit from the DMME and conducting exploratory drilling of the Coles Hill deposit pursuant to that permit. It has spent nearly $2 million on advance technical research of its own and another $2 million on commissioning third-party studies to develop the technical details, analyze the safety and environmental risks, and assess the economic costs and

benefits of developing the uranium beneath Coles Hill. It has spent about $1.2 million on preliminary environmental sampling of the ground and surface water surrounding the site—the bulk of which went above and beyond the sampling required by Virginia's permitting process. And it has invested over $10 million in setting up and maintaining office space and hiring employees. All of these up-front investment costs are wholly deprived of value unless Virginia's ban on uranium mining is lifted.

101. While—as with any major development project—Virginia Uranium will need to meet additional regulatory milestones, such as obtaining permits from the NRC, before beginning mining operations at Coles Hill, there is a strong likelihood that those additional milestones can be met. Indeed, the substantial investments Plaintiffs have already made in the Coles Hill project—even in the face of Virginia's blanket ban—demonstrate that they intend to take whatever steps the law requires to see the project through. Virginia's ban is the only obstacle that amounts to *an absolute bar* to mining uranium. That ban deprives Plaintiffs of even the *opportunity* of developing the valuable deposit of uranium beneath their land.

CLAIM FOR RELIEF

COUNT I

Federal Preemption of Virginia's Moratorium on Uranium Mining

102. Plaintiffs incorporate by reference the allegations of the preceding paragraphs.

103. The Constitution makes federal law "the supreme Law of the Land," U.S. CONST. art. VI, cl. 2, and any state law that is contrary to federal law is preempted and thus invalid under the Supremacy Clause.

104. State law is preempted by federal law either if it falls within a field that is completely occupied by federal law or if it directly conflicts with a provision of federal law. State law directly conflicts with federal law either if it is physically impossible to comply with

both federal and state law or if state law stands as an obstacle to the full accomplishment and execution of the purposes and objectives of federal law.

105. By passing the AEA, Congress has preempted the field of radiological safety concerns. The safety of uranium milling and tailings management is a matter of exclusively federal regulatory jurisdiction, and any state regulation of uranium development that is grounded in radiological safety concerns related to the areas of *federal* regulation fall within the field preempted by the AEA.

106. Nonetheless, Virginia has since 1982 imposed and maintained a flat ban on uranium mining. That ban is thoroughly grounded in radiological safety concerns primarily related to the management and storage of uranium tailings. Accordingly, it falls within the field preempted by the AEA and is invalid under the Supremacy Clause.

107. Congress enacted the AEA to encourage the development of nuclear resources and generation of atomic energy in the national interest, but subject to safety standards established by the NRC. The AEA, and the regulations promulgated by the NRC pursuant to it, thus strike a particular balance between the objectives of promoting uranium development and ensuring health, safety, and environmental protection. That balance contemplates that uranium development should not be barred on the basis of safety concerns, including those related to uranium milling and tailings management, so long as the federal regulatory standards governing those activities are satisfied.

108. Defendants' enforcement of Virginia's ban on uranium mining, based on a directly contrary weighing of the safety risks, upsets the balance struck by the AEA and thus poses an obstacle to the full implementation and execution of the purposes and objectives of

federal law. Accordingly, the ban is preempted by federal law and invalid under the Supremacy Clause.

109. Pursuant to the authority Congress delegated it in the AEA, the NRC has promulgated extensive regulations governing radiological safety, including specifically regulations governing tailings management. Those regulations allow uranium tailings to be safely managed and stored, so long as federal standards are met.

110. Virginia's uranium ban, however, flat-out prohibits the safe management of uranium tailings, by prohibiting the mining of uranium in the first place. Moreover, because Virginia enacted and maintains its ban on uranium mining because of radiological safety concerns primarily related to tailings management, that state law is intended and specifically designed to function as a ban on storing uranium tailings within the state. It is physically impossible to develop uranium in Virginia and simultaneously comply with both federal law, which regulates but allows the storing of uranium tailings, and Virginia's law, which effectively bans storing uranium tailings. Accordingly, Virginia's ban is preempted by federal law and invalid under the Supremacy Clause.

PRAYER FOR RELIEF

111. WHEREFORE, Plaintiffs pray for an order and judgment:

a. Declaring that Virginia's ban on uranium mining, VA. CODE § 45.1-283, is preempted by federal law, invalid under the Supremacy Clause, and devoid of any legal force or effect;

b. Enjoining Defendants and their employees and agents from complying with Virginia's ban on uranium mining;

c. Ordering Defendants and their employees and agents, respectively, to accept and process Plaintiffs' applications for the following permits and licenses

notwithstanding Virginia's ban on uranium mining and in the same manner as they would if those permits and licenses pertained to any other mineral that may be legally mined:

(i) A Mining permit from the DMME,

(ii) A Mine Safety permit from the DMME,

(iii) A Prevention of Significant Deterioration permit from the DEQ,

(iv) A Major Source of Hazardous Air Pollutants permit from the DEQ,

(v) A Virginia Pollutant Discharge Elimination System permit from the DEQ, and

(vi) A Hazardous Waste Management Facility permit from the DEQ;

d. Awarding Plaintiffs their reasonable costs, including attorneys' fees, incurred in bringing this action; and

e. Granting such other and further relief as this Court deems just and proper.

Dated: August 5, 2015

Respectfully submitted,

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**Pro hac vice* application forthcoming

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